

WESTERN AND CENTRAL ABYSSINIA.

IT is with no desire to depreciate the work under review, or any other of the books published on the subject of Abyssinia since the great work of James Bruce (more than a hundred years ago), if the present reviewer ventures to remark that no modern work on the subject of Abyssinia has yet been written which is at all commensurate with the importance of that marvellously interesting African State. Possibly such a work might have been finally compiled had Baron Carlo von Erlanger lived to write it. In his posthumous "Forschungsreise durch Süd-Schoa, Galla und die Somali-Länder," he treats of a fragment of Abyssinia in a way which, if it had been applied to the whole of that region, would have illustrated effectively for the first time to the man of science, as well as to the more general reader, the most interesting part of Africa.

A little reflection will convince those who have not thought on the subject that Abyssinia is from every point of view the most interesting portion of the Dark Continent. Here the fauna and flora of the Mediterranean region meet those of tropical Africa. Here the lofty, snow-capped mountains retain a wild goat (the most southerly occurrence of the Caprine subfamily in the African continent). Here also is a peculiar and aberrant dog—*Canis simensis*. In the western lowlands of Abyssinia there is a true wild boar—*Sus sennaarensis*. Several of the antelopes and two or three species of monkeys are peculiar to Abyssinia in their range, as are numerous birds, a few fish, two or three reptiles, and a great many plants. Some of the fish are closely related to species in North Africa or Syria. The human races are of varied types and widely different origins, speaking a variety of languages, some of which are unclassified. In the extreme south-west of Abyssinia there are Negro types which have been classified as Bantu, and others which resemble either the Congo or the Bushman pygmies. In the south-east and south, and thence almost to the centre of the country, the population is mainly of the handsome Gala-Hamitic type or of the kindred Somali stock. In the west there are Nilotic Negroes, and in the north, centre, and east races that are compounded of Hamite and Semite, with traces here and there of ancient Greek or Egyptian colonies, while there are dark-skinned Jews whose origin would seem to antedate by many centuries the destruction of Jerusalem.

In this country has been developed the strangest and most debased type of Christianity, and there are forms of devil worship or belief in demoniac possession of great interest to the student of religions. Abyssinia has a history, more or less credible, going back to a thousand years before Christ, while its records from

the first impact of the Portuguese in the sixteenth century down to the present day have been part of the world's history, linked on to the records of civilised Europe, Asia, and North Africa. Whereas nearly all Africa south of the Sahara, with the exception of the Upper Niger and a narrow fringe along the west and east coasts, only came within the domain of written history a hundred years ago, Abyssinia has as much formed part of the record of Caucasian civilisation as Britain or Morocco.

The author of the book under review gives within the compass of 315 pages an excellent general description of western and central Abyssinia, and the

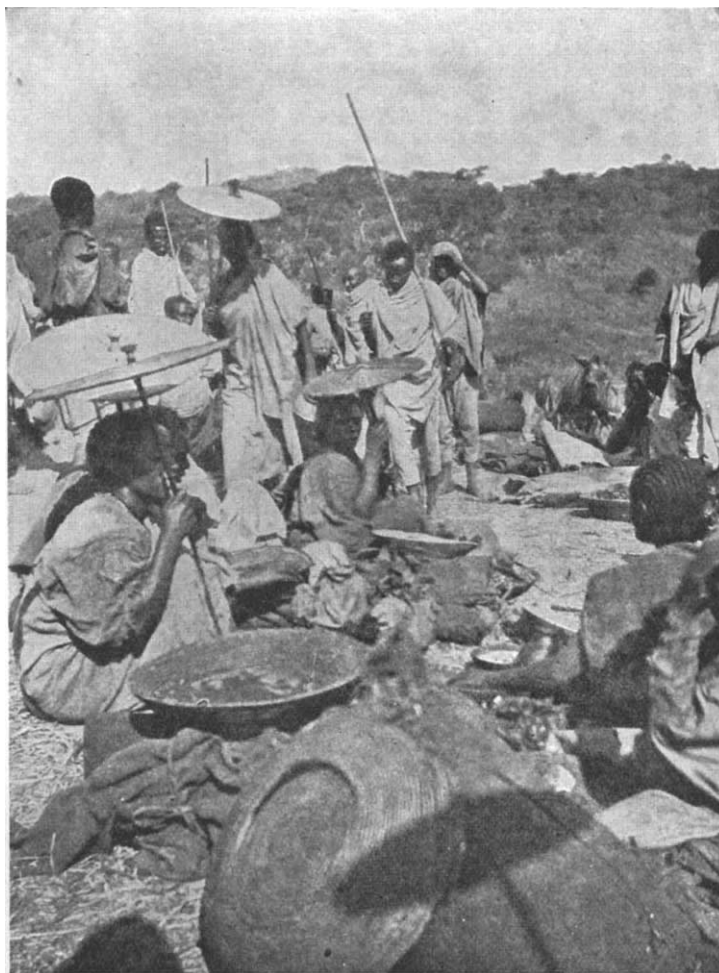


FIG. 1.—Market day at Zegi. From "The Source of the Blue Nile."

book contains a number of good photographic illustrations. In his preface, and in one or two passages in the body of the book, the author hints with some ominousness at future trouble which is coming on the Sudan from the direction of Abyssinia. It would be out of place in NATURE to discuss international politics, nor do the readers of this Journal tend to take the point of view that what is quite permissible to Great Britain in the way of political pushfulness is almost criminal when forming part of the policy of a sister European or American nation. But apart from the warnings which are given by Mr. Hayes as to the growth of German or American influence in

¹ "The Source of the Blue Nile. A Record of a Journey through the Sudan to Lake Tsana in Western Abyssinia, and of the Return to Egypt by the Valley of the Atbara, with a note on the Religion, Customs, &c., of Abyssinia." By Arthur J. Hayes; and an Entomological Appendix by Prof. E. B. Poulton, F.R.S. Pp. xi+315. (London: Smith, Elder and Co., 1905.) Price 10s. 6d. net.

Abyssinia, he seems to indicate, and with much more probability, political dangers from the effervescence of the Abyssinians themselves. Before long the adjacent regions of the Egyptian Sudan promise to become exceedingly prosperous with their fertile soil and accessibility through British-made railroads or river navigation. Mr. Hayes seems to anticipate that this coming prosperity may be a source of temptation to the reckless mountaineers of western Abyssinia, who can reach the Sudan so much more easily than the Sudan can vanquish Abyssinia.

In his desire to give an accurate picture of Abyssinia, both at the present day and at previous periods, the author quotes extensively from earlier writers, with acknowledgment, and, where the works are recent, by direct permission. These extracts, coupled with his own shrewd and accurate observations, make up a most readable and, perhaps it may be said, valuable description of Abyssinia. There is a good deal of new information about Abyssinian Christianity, coupled with some admirable photographs of frescoes in the interior of churches. The author's remarks on pp. 56 and 59 on the soil created by the work of the white ant, and the washing of this soil down from the highlands of Abyssinia to the lowlands of Egypt and the Sudan, are distinctly interesting. There are one or two trifling mistakes which should be corrected; for instance, in the text and illustration on p. 184, a fine specimen of a reed-buck antelope is described as a "hartebeest." It is interesting to note that, so far north as the valley of the Atbara, such a typical specimen of the reedbuck should be found.

The author and the authorities whom he quotes somewhat extensively give an interesting description of the Falashas, the so-called black Jews of central Abyssinia, the region round Lake Tsana. The Falashas are undoubtedly Jews in religion, and have been for many centuries; but great caution should be exercised by people who desire to write with scientific accuracy in identifying these people of Semitic origin with the ancient Israelites of Palestine. It is alleged that the traditions of these Falashas would make them the descendants of a branch of the Jewish people which had never known Palestine, but had migrated to Abyssinia direct from Egypt. Such theories as this are hardly worth discussing by the scientific ethnologist. The Children of Israel were undoubtedly an Arab tribe that originated in the region between Syria and Egypt. Their monotheistic religion spread far and wide through the centuries into Arabia, Abyssinia, and North Africa; and, elsewhere, in the form of Christianity. The Jewish people that were expelled from Palestine by the Romans were a very composite race, containing a good deal of Armenian blood. It is possible that the Falashas, like other tribes of "black Jews" elsewhere, adopted the Jewish religion at some period before the spread of Christianity or of Islam, but are not directly descended from any section of the original Jews.

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OPSONINS AND TUBERCULOSIS.¹

WHEN the scientific researches of Durham, working in Gruber's laboratory, revealed in 1895 the presence of agglutinins in the blood, the discovery was soon put to practical use in clinical medicine by Widal

¹ "On the Diagnosis of Tubercle by the Examination of the Blood, and on Spontaneous Phagocytosis." By Dr. A. E. Wright and Staff-Surgeon Reid, R.N. (Proc. Roy. Soc., B., vol. lxxvii., 1906.)

"On Spontaneous Phagocytosis, and on the Phagocytosis which is obtained with the Heated Serum of Patients who have responded to Tubercular Infection, or, as the case may be, to the Inoculation of a Tubercle Vaccine." (*Ibid.*)

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and Grünbaum, who showed what valuable aids these substances were in the diagnosis of typhoid fever; further, and this does not seem to have been so generally recognised, they have been shown to be of service in the prognosis of that disease. A similar and no less important practical use in the diagnosis of tubercular infections was made by Wright and Douglas (Proc. Roy. Soc., vol. lxxiv.), and is here further developed by the former in conjunction with Staff-surgeon Reid. The method employed is the estimation of the opsonic power of the serum; and the technique is that described by Drs. Wright and Douglas in a previous paper (Proc. Roy. Soc., vol. lxxii.). This briefly consists in incubating for fifteen minutes at body temperature a mixture of equal volumes of washed blood corpuscles, bacterial suspension, and the serum under investigation. Blood films of this mixture are prepared and appropriately stained, and the phagocytic count is estimated and compared with the result attained by conducting the same experiment with normal serum, such serum being obtained by pooling the blood of a number of healthy individuals. The phagocytic count of the experiment conducted with normal serum is taken as unity, and the result of the other count as compared with this gives the opsonic index of the serum under investigation.

In the recent paper the authors first give the result of a large number of blood examinations in generalised and localised tubercular infections. Two very important facts are the outcome of this work:—

(a) That in localised tubercular infections the opsonic index is uniformly low.

(b) That in cases of tuberculosis associated with constitutional disturbances the index is continually varying, the patient living a "life of alternating negative and positive phases," that is to say, the resistance of the blood is reduced as an immediate effect of the bacterial poison and then increased above the normal in response to the infection.

Further, ample evidence has accumulated substantiating the fact already enunciated that normal sera do not vary more than ten per cent. on either side of unity.

Applying these principles to the practical diagnosis of tubercular infections, it will be obvious that much value will accrue from a series of examinations of the blood, and to a less extent from a single examination. Where a series of measurements of the opsonic power of the blood reveals a persistently low opsonic power with respect to the tubercle bacillus, it may be inferred, in the case when there is evidence of a localised bacterial infection which suggests tuberculosis, that the infection in question is tubercular in character. A continually fluctuating index would point to a tuberculous infection associated with constitutional disturbances, whilst an index which never varied on either side of the normal to a greater extent than ten per cent. would be taken as evidence against a tubercular infection.

If only one examination of the blood is possible and the index is found to be low, then according to the evidence in the case under investigation of a local bacterial infection or of constitutional disturbances, it may be inferred with probability that the infection is of a tuberculous nature. A high index would be taken as evidence of a systemic tuberculous infection which is active or has recently been active. But no inference at all, either positive or negative, is warranted if on a single occasion the tuberculo-opsonic index be found to be within normal limits. In this case, however, it is possible by employing a further test to arrive at a diagnosis. This consists in repeating the experiment after having heated the serum for